

ABSTRACT OF THE DISCLOSURE

A transmission line monitoring apparatus includes a first optical coupling unit, a first optical dividing unit, a second optical coupling unit, a second optical dividing unit and a monitoring unit. The first optical coupling unit couples a down data signal with a first wavelength and an examination signal with a second wavelength into a first coupled signal. The first optical dividing unit receives the first coupled signal and divides the first coupled signal into the down data signal with the first wavelength and the examination signal with the second wavelength. The second optical coupling unit couples an up data signal with the first wavelength and the examination signal from the first optical dividing unit into a second coupled signal. The second optical dividing unit receives the second coupled signal and divides the second coupled signal into the up data signal with the first wavelength and the examination signal with the second wavelength. The monitoring unit monitors a fault and a position of the fault.

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